

INL's Steve Herring, left, and Bob Cherry, right, showed University of Calgary students, an advisor and a professor around INL's nuclear hydrogen laboratory and other facilities.

Calgary students visit INL, expand exchanges

By [Keith Arterburn](#), INL Communications & Governmental Affairs

"I was surprised about the range of research here at Idaho National Laboratory," said [University of Calgary](#) undergraduate Adam Fajner during his first visit to INL in early May.

Fajner was one of six students who visited INL in May. Calgary Assistant Professor Jason Donev and class adviser, Douglas Straus, brought the group to INL as part of the expanding research and education exchange efforts between INL and Canada's provinces of Alberta and Saskatchewan.

"We'd like to do it again each year with new students," Donev said. "It is valuable for students to see things such as the stored used nuclear fuel and hot cells in use, which we discussed in class. Now it makes sense to them."

Fajner, who is completing his bachelor's degree in civil engineering and considering graduate education in nuclear engineering, said he was impressed to learn how specific science and engineering concepts were applied in a wide variety of energy research and production areas. His classmate and fellow INL visitor agreed.



The recent visit demonstrates the expanding research and education exchange efforts between INL and Canada's Alberta and Saskatchewan provinces.



Herring details hydrogen production experiments conducted in INL's nuclear hydrogen laboratory for visitors from the University of Calgary in Alberta, Canada.

"I enjoyed seeing the application of what I learned in school," said Rob Garth, who has a bachelor's degree in anthropology and is pursuing a career in energy research. After seeing nuclear fuel work and hydrogen production research, he added, "I know important research is being done here at INL."

On the first day, the students and their advisers toured INL's desert facilities, including [EBR-I](#), the [Advanced Test Reactor Complex](#), the [Materials & Fuels Complex](#), the [Hot Fuel Examination Facility](#) and the Fuel Conditioning Facility. On the second day, they toured laboratories at the INL Research Center, including the [High Temperature Electrolysis](#) and [Nuclear Hydrogen research](#) laboratory.

After visits to laboratories that research biomass, catalysis, synthetic fuels and unconventional fossil resources, INL host Robert Cherry outlined INL's Hybrid Energy Systems concept, which proposes combining varied energy sources to exploit their complementary characteristics for production of electricity, process heat and hydrogen.

The visit was part of an expanding effort to enhance relationships between INL researchers and Canadian universities and research organizations.

"We are working to build active relationships with universities, government and companies doing energy work in Alberta," said Cherry. In the summer of 2008, Cherry spoke to an energy conference in Alberta and co-taught a six-week energy course at the University of Calgary [Institute for Sustainable Energy, Environment and Economics](#) (ISEEE).

Cherry also has been invited to present at a June energy conference in Alberta. And more discussions are planned between senior INL and Alberta representatives in July during the [Pacific Northwest Economic Region](#) (PNWER) meeting.

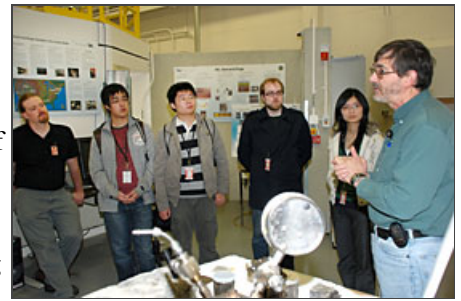
INL has been expanding its relationships with Alberta for the past three years. In October 2007, informational exchanges were begun and a nuclear energy and water workshop was held at INL, followed by a series of collaborations. In March 2008, INL and the [Alberta Research Council](#) signed a Memorandum of Understanding to pursue collaborative research. Educational and research

exchanges followed. In December 2008, Alberta Deputy Premier Ron Stevens led a delegation to INL for orientation and talks.

Alberta has world-scale energy resources and is second only to Saudi Arabia in oil reserves when its oil sand reserves are considered. It is the top exporter of oil to the U.S., providing 11 percent of U.S. crude oil imports and 60 percent of gas imports.

The future of U.S. and Canadian energy security depends on productive technological collaborations that yield more reliable energy sources from within North America, while maintaining environmentally-friendly approaches to their development. Alberta research priorities are well-focused and organized. As in the U.S., they include bitumen upgrading, clean carbon and coal, improved recovery, carbon dioxide management, alternative and renewable energy, and water management.

[Feature Archive](#)



INL researcher Carl Palmer, right, explains current research into oil shale and other unconventional fossil energy resources.